

Fact Sheet



For Draft/Proposed Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on April 23, 2013.

Permit Number: **R30-05100002-2013**
Application Received: **November 1, 2013**
Plant Identification Number: **03-54-051-00002**
Permittee: **Eagle Natrium LLC**
Facility Name: **Natrium Plant**
Mailing Address: **P.O. Box 191, New Martinsville, WV 26155**

Permit Action Number: *SM02* Revised: *Draft/Proposed*

Physical Location:	New Martinsville, Marshall County, West Virginia
UTM Coordinates:	512.70 km Easting • 4399.60 km Northing • Zone 17
Directions:	WV State Route 2, 5 miles north of New Martinsville, WV.

Facility Description

Eagle Natrium LLC owns and operates a Chlor-Alkali and Derivatives Plant in Marshall County, West Virginia commonly known as the Natrium Plant. The plant operates 24 hours a day, 7 days a week. The facility is located approximately 6,850 feet above salt deposits. In 1941 the U.S. Government purchased the current plant site and began to drill the salt bed to produce the brine needed to produce chlorine (Cl_2) and caustic soda (NaOH). In addition to producing Cl_2 and NaOH , the facility produces hydrogen gas (H_2), hydrochloric acid (HCl), and calcium hypochlorite [$\text{Ca}(\text{OCl})_2$]. The facility is a Chemicals and Allied Products facility and operates under SIC codes 2812 (Alkalis and Chlorine) and 2819 (Industrial Inorganic Chemicals, Not Elsewhere Classified).

Project Description

No. 5 Boiler currently burns pulverized coal and utilizes natural gas for start-up and flame stabilization. The dry bottom wall fired unit is currently rated at 878 MMBtu/hr and began operation in 1966. It is equipped with a dry, cold side, electrostatic precipitator and low NO_x burners with over fire air. Low-NO_x burners with the over fire air configuration were installed in 2004. This boiler was specifically configured to Turbine #7, which is a 70 megawatt (MW) steam turbine/generator set.

No. 6 Boiler was installed in 1993. It is a Zurn 181 MMBtu/hr boiler designed to burn hydrogen gas. However, it uses natural gas for start-up and stabilization procedures. The primary purpose of this unit is to generate steam that produces electricity and the remaining heat energy in the steam, after being exhausted by the turbines, is then used in the manufacturing process at the Natrium Plant. Most of the electricity generated from these boilers is consumed by the Natrium Plant; however, a portion of the electricity can be sold externally.

Eagle Natrium proposes to re-configure Boiler No. 5 to be completely fired by natural gas, which will require the heat input size of the unit to be increased up to 999 MMBtu/hr to yield the original designed steam output of 750,000 lb per hour. For Boiler No. 6, Eagle Natrium proposes to configure it to be fired completely on natural gas and retain the ability to consume hydrogen gas. The main reason for the modification of No. 5 Boiler is to comply with 40 C.F.R. 63 Subpart DDDDD as a “Gas 1” affected source. For No. 6 Boiler, increased operational flexibility is the main reason for the conversion to have the capability to combust natural gas. Except for the pollutant CO, the proposed changes to No. 5 and 6 Boilers should result in decreases in potential and actual emissions.

Title V Permit Significant Modification

The original scope of this significant modification was to incorporate the requirements approved in permit R14-0027D, which involved (i) the conversion of Boiler No. 5 from being coal-fired to natural gas-fired; and (ii) Boiler No. 6 will be modified to be fired completely on natural gas but retain the ability to combust hydrogen gas. This also involved the incorporation of applicable NSPS and MACT requirements for the boilers. In so doing, it was discovered that applicable MACT requirements for the Molten Salt Furnace and Chlorine Recovery Boiler must be incorporated into the permit as well.

Emissions Summary

The changes in facility-wide potential emissions (in units of TPY) for this permitting action are given in the following table:

Pollutant	Current ¹	SM02 Change ²	Proposed
Particulate Matter (PM ₁₀)	960	-344.5	615.5
Sulfur Dioxide (SO ₂)	15,000	-6,476	8,524
Nitrogen Oxide (NO _x)	3,680	-2,390	1,290
Carbon Monoxide (CO)	661	+32.02 ³	693.02
Volatile Organic Compounds (VOC)	100	+32.4	132.4
Hydrochloric acid (HCl)	661	-651	10
Hydrofluoric acid (HF)	38	-38	0
Lead (Pb)	4	-4	0

¹ There were no changes in facility-wide PTE for significant modification SM01 according to its Fact Sheet. Therefore, the current PTEs are from the renewal Fact Sheet.

² Except for HCl, HF, and Pb, the changes in emissions of the pollutants were computed using the hourly emission rate data provided in Tables #1 through #4 and #7 in the Engineering Evaluation for R14-0027D, and using an operating schedule of 8,760 hours per year. The changes in HCl, HF, and Pb are per technical correspondence received from the permittee via e-mail on 8/5/2014 and 8/12/2014.

³ According to the Engineering Evaluation for R14-0027D the permittee conducted a netting analysis to identify all creditable increases and decreases at the facility that occurred during the contemporaneous period. Table #7 of the evaluation indicates a net CO emission increase of 87.9 tpy, which is less than the 100 tpy significance threshold for CO specified in 45CSR§14-2.74.a. Therefore, this project does not represent a “net significant” increase of CO emissions and a major modification of a major source. The reason the 87.9 tpy increase does not appear in the table above is because the PTE increases due to installations of #1 through #3 HCl Synthesis units (listed in Table #7 of the Engineering Evaluation) have already been accounted for in the renewal permit issued on 4/23/2013. The 32.02 tpy increase is based on the scope of this significant modification, which includes increases from Boilers No. 5 and No. 6, and decreases due to shutdown of Boilers No. 3 and No. 4.

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 693.02 tpy of CO; 1,290 tpy of NO_x; 615.5 tpy of PM₁₀; 8,524 tpy of SO₂; 132.4 tpy of VOC; and 10 tpy of HCl. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, and over 10 tons per year of a single HAP, Eagle Natrium LLC – Natrium Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	PM from Indirect Heat Exchangers
	45CSR10	Sulfur oxides limits
	45CSR13	Construction/modification permits
	45CSR16	NSPS Rule
	45CSR30	Operating permit requirement.
	45CSR34	Emission standards for HAPs
	45CSR40	Control of Ozone Season NO _x Emissions
	40 C.F.R. 60 Subpart Db	NSPS for Industrial-Commercial-Institutional Steam Generating Units > 100 MMBtu/hr Heat Input Capacity
	40 C.F.R. 63 Subpart DDDDD	Major Source Boiler MACT
	40 C.F.R. Part 64	Compliance Assurance Monitoring
State Only:	None	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (if any)
R14-0027D	July 1, 2014	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

- I. **45CSR2 – TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGERS.** This rule establishes emission limitations for smoke and particulate matter which are discharged from fuel burning units. Boilers No. 3, No. 4, No. 5, and No. 6 are subject to this rule as Type 'b' units (*cf.* 45CSR§2-2.10.b.), and No. 5 maintains this type for the post-modification fuel. There are two natural gas-fired sources that are also subject to 45CSR2. One unit is the Molten Salt Furnace (Em. Unit ID: R900), and the other is a Chlorine Recovery Boiler (Em. Unit ID: R881) utilized in the Sulfur Chloride section of the Chlorine Department.

Boilers No. 3 and No. 4

Boilers No. 3 and No. 4 are subject to the opacity and mass rate limits of 45CSR§§2-3.1. and 4.1., respectively. Refer to modified permit conditions 4.1.1.a.ii., 4.1.2.a.ii., and 4.1.5. However, Boilers No. 3 and No. 4 will be permanently shut down according to the timing requirement of condition 4.1.9. as part of this permitting action. Notes have been added in Rule 2 conditions regarding No. 4 and No. 3 since they will be permanently shut down. Refer to modified Title V permit conditions 4.3.1., 4.4.3., 4.4.4., 4.5.1., 4.5.2., 4.5.3., 4.5.4., and 4.5.5. Test dates also have been updated in 4.3.1.

Boiler No. 5

Boiler No. 5 also is subject to the opacity and mass rate limits (conditions 4.1.3.a.ii. and 4.1.5.), and has been complying with the PM emission standard and monitoring requirements. The permittee currently ensures a specific number of fields of the electrostatic precipitator to be in service and conducts monthly visible emission observations with periodic PM testing based on the schedule outlined in 45CSR2A. The conversion from coal to firing only natural gas for Boiler No. 5 will allow the operator to discontinue these monitoring measures. In particular, 45CSR§2-8.4.b. provides an exemption to the requirements of 45CSR§§2-8.1.a. and 8.2. for units that combust only natural gas.

- Upon conversion to natural gas, Boiler No. 5 will become exempt from 45CSR§2-8.1.a., which is Method 9 opacity testing to demonstrate compliance with section 3 opacity limitations.
- Upon conversion to natural gas, Boiler No. 5 will become exempt from 45CSR§2-8.2., which is monitoring, and includes the 45CSR2 monitoring plan requirement in 45CSR§2-8.2.a. Therefore, the 45CSR2 monitoring plan (contained in Appendix A) will not be required to include Boiler No. 5 once it is converted to combust only natural gas.

Additionally, the periodic testing in condition 4.3.1. is based upon 45CSR§2A-5.2.a. and also cites testing in 45CSR§2-8.1. While 45CSR§2-8.4.b. does not specify an exemption from 45CSR§2-8.1.b. for natural gas-fired units, interpretive rule 45CSR§2A-3.1.b. provides an exemption from sections 5 and 6 of 45CSR2A which includes the tiered scheduled testing of 45CSR§2A-5.2.a. that is foundational to permit condition 4.3.1. Therefore, Boiler No. 5 will be exempt from the requirement in condition 4.3.1. after the conversion to natural gas. This also agrees with the language in underlying permit R14-0027D, condition 4.3.1. (Title V condition 4.3.4.). And while the exemption is granted for natural gas units, the exemption also provides that the Director reserves the right to utilize the testing in 45CSR§2-8.1.b.

After the conversion, permit R14-0027D will establish compliance with the rule by restricting the fuel type to pipeline quality natural gas for No. 5 Boiler (condition 4.1.3.b.iii.). An additional recordkeeping requirement from the rule has been added to condition 4.4.3. since the requirement will change for Boiler No. 5 once it is converted from coal- to natural gas-fired. The extra condition (4.4.3.1.) will set forth the requirement for the post-conversion fuel. Test dates also have been updated in 4.3.1.

Boiler No. 6

The No. 6 Boiler is subject to the opacity and mass rate limits of 45CSR§§2-3.1. and 4.1., respectively. Refer to modified permit conditions 4.1.4.c. and 4.1.5. Condition 4.1.4.c. specifies that use of natural gas and hydrogen gas (alone or in combination) ensures compliance with several other applicable requirements in this rule (including 45CSR§§2-3.1., 4.1.b., 8.1.a., and 8.2.), some of which were not listed in the citation of authority in the underlying PSD permit condition. Therefore, the streamlined requirements are added to the citation of authority for 4.1.4.c. Compliance with the limitations is demonstrated by the requirements in permit condition 4.2.2. and 4.4.2.

45CSR2 Monitoring Plan

The monitoring plan is currently included in the permit Appendix A, and is derived from applicable requirement 45CSR§2-8.2.a. However, once No. 5 Boiler is converted to natural gas it will be exempt from this requirement as discussed above. Also, once Boilers No. 3 and No. 4 are permanently shut down the monitoring plan will no longer be in effect for these units. Since underlying requirement 4.1.4.c. states that compliance with the fuel requirements satisfies compliance with 45CSR§2-8.1.a. and 8.2., the periodic Method 9 testing and Rule 2 Monitoring Plan are streamlined by the fuel requirements for Boiler No. 6. To account for these changes, a note has been added to Section I of the monitoring plan in Appendix A. A note has been added after condition 4.5.1. to indicate that the periodic exception report of 45CSR§2-8.3.b. will not be applicable to No. 5 Boiler after its conversion to natural gas since it will also not be subject to the 45CSR2 Monitoring Plan in 45CSR§2-8.2. in accordance with 45CSR§2-8.4.b. This determination is made since the report in 45CSR§2-8.3.b. specifically applies to “details of all excursions or monitored parameters established in an approved monitoring plan...”

R14-0027D Revisions for the Boilers

Refer to modified Title V permit conditions 4.1.1. through 4.1.5., 4.2.1., 4.2.3., 4.3.1., and 4.3.4. for the applicable limitations and monitoring requirements of this rule that have been incorporated via permit R14-0027D (discussed in Section IV of this Fact Sheet).

Molten Salt Furnace & Chlorine Recovery Boiler

There are two natural gas-fired sources that are also subject to 45CSR2. One unit is the Molten Salt Furnace (Em. Unit ID: R900), and the other is a Chlorine Recovery Boiler (Em. Unit ID: R881) utilized in the Sulfur Chloride section of the Chlorine Department. These sources were not added or modified in permit R14-0027D. It appears the sources were inadvertently not included in prior Title V permitting actions. This action, however, includes the sources and all applicable requirements for them. Both of the units combust only natural gas. Both units operate by indirect heat transfer, and as such meet the definitions in 45CSR§§2-2.10. and 2.14. Both units are Type ‘b’ as defined in 45CSR§2-2.10.b., and are subject to the ten (10) percent opacity limitation and mass rate limitation in 45CSR§§2-3.1. and 4.1.b., respectively. The specific details for each source are given below:

Molten Salt Furnace (Em. Unit ID: R900)

R900 is rated at 15 MMBtu/hr design heat input. The PM mass rate limit is 1.35 lb/hr for R900. R900 is subject to both opacity and mass rate limits. However, 45CSR§2-8.4.b. provides an exception to the monitoring in 45CSR§§2-8.1.a. and 8.2. for natural gas-fired units. Therefore, periodic Method 9 opacity monitoring in the rule is not required. The provisional testing in 45CSR§§2-8.1.b. and 8.1.c. is applicable to the mass rate limit for R900. The fuel recordkeeping in 45CSR§2-8.3.c. is applicable to R900. Finally, the SSM requirements in 45CSR§§2-9.1., 9.2., and 9.3. are applicable to R900. Refer to Title V permit conditions 11.1.4., 11.1.5., 11.1.6., 11.3.3., and 11.4.2. for R900.

It has been noted that R900 is currently permitted as being subject to 45CSR7 in permit condition 11.1.1. However, as part of this permitting action it has been determined that R900 is a “fuel burning unit” that operates as an “indirect heat exchanger” and is not a “process heater” as these terms are defined in 45CSR§§2-2.10., 2.14., and 2.26. Therefore, R900 is subject to 45CSR2. As such, R900 is not subject to 45CSR7 as provided in the exemption at 45CSR§7-10.1. Consequently, R900 is stricken from the applicability of condition 11.1.1. Condition 11.2.1. has not been revised to account for R900 since 45CSR2 does not require additional monitoring for R900 and accordingly 45CSR§2A-3.1.a. provides an exemption from VE testing requirements and monitoring plan requirements in 45CSR§§2A-5 and 6, respectively. Moreover, condition 11.2.1. is applicable to the 45CSR7 opacity limitation applicable to the Prill Tower Air Scrubber SC068. A parenthetical applicability note has been added after the citation of authority in condition 11.2.1. to ensure clarity.

Chlorine Recovery Boiler (Em. Unit ID: R881)

Boiler R881 is rated at 1.25 MMBtu/hr design heat input. Boiler R881 is exempt from the mass rate limit in 45CSR§2-4.1.b. as provided in 45CSR§2-11. In addition to section 4, 45CSR§2-11 further exempts R881 from sections 5, 6, 8, and 9 of 45CSR2 due to its heat input being less than 10 MMBtu/hr. Therefore, R881 is subject only to the opacity limitation. Considering that it combusts only natural gas, and is comparatively small, the rule requires no additional specific monitoring for R881 (including VE monitoring). Refer to condition 8.1.7. for R881.

- II. **45CSR10 – TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF SULFUR OXIDES.** The purpose of this rule is to prevent and control air pollution from the emission of sulfur oxides. Boilers No. 3, No. 4, No. 5, and No. 6 are subject to this rule as Type ‘b’ units (*cf.* 45CSR§10-2.8.b.), and No. 5 maintains this type for the post-modification fuel.

Boilers No. 3 and No. 4

Boilers No. 3 and No. 4 are subject to the mass rate limit of 45CSR§10-3.1.e. and demonstrate compliance based on a 24-hour averaging time as specified in 45CSR§10-3.8. Refer to modified permit conditions 4.1.1.a.iii. and 4.1.2.a.i. However, note that Boilers No. 3 and No. 4 will be permanently shut down according to the timing requirement of condition 4.1.9. as part of this permitting action. Notes have been added in Rule 10 conditions regarding No. 4 and No. 3 since they will be permanently shut down. Refer to modified Title V permit conditions 4.4.1., 4.4.2., 4.5.1., and 4.5.6.

Boiler No. 5

Boilers No. 5 is subject to the mass rate limit of 45CSR§10-3.1.e. and demonstrate compliance based on a 24-hour averaging time as specified in 45CSR§10-3.8. Refer to modified Title V permit conditions 4.1.3.a.i. Upon conversion to natural gas, Boiler No. 5 will demonstrate compliance with the limitation by combusting only natural gas. Refer to modified Title V permit condition 4.1.3.b.iii. that streamlines the limitation by requiring combustion of natural gas. Upon conversion to natural gas, Boiler No. 5 will qualify for the exemption in 45CSR§10-10.3. that relieves the source from the requirements of section 8 (*i.e.*, testing, monitoring, recordkeeping and reporting). Therefore, a note has been added to conditions that cite 45CSR§10-8 in order to specify that the specific requirement will not be applicable to Boiler No. 5 once the conversion to natural gas is complete. Refer to modified Title V permit conditions 4.4.1., 4.4.2., and 4.5.1.

Boiler No. 6

Boiler No. 6 is subject to the mass rate limit of 45CSR§10-3.1.e. and currently demonstrates compliance based on a 24-hour averaging time as specified in 45CSR§10-3.8. However, once the conversion to natural gas is complete, Boiler No. 6 will not be subject to the testing and MRR but will demonstrate compliance with the limitation by combusting only natural gas. Refer to modified Title V permit condition 4.1.4.c. that streamlines the limitation when combusting the specified fuels (*i.e.*, natural gas and hydrogen gas) stated in 4.1.4.c. Additionally, in accordance with condition 4.1.4.c., the 45CSR10 monitoring plan under 45CSR§10-8.2.c. is streamlined by compliance with the fuel requirements in condition 4.1.4.c. Refer to modified Title V permit conditions 4.2.4., 4.4.1., 4.4.2., 4.5.1., and 4.5.6.

45CSR10 Monitoring Plan

The monitoring plan is currently included in the permit Appendix A, and is derived from applicable requirement 45CSR§10-8.2.c. However, once No. 5 boiler is converted to natural gas it will be exempt from 45CSR§10-8 as discussed above. Furthermore, the exception reporting in condition 4.5.6. is for permittees employing CEMS for an approved monitoring plan. Since a 45CSR10 monitoring plan will not be required for No. 5 Boiler after conversion to natural gas, it follows that utilization of a CEMS for such monitoring plan will then not be subject to the requirement of 45CSR§10A-7.2.a. Once Boilers No. 3 and No. 4 are permanently shut down the monitoring plan will no longer be in effect for these units. To account for these changes, a note has been added to Section II of the monitoring plan in Appendix A. Since underlying requirement 4.1.4.c. states that compliance with the fuel requirements satisfies compliance with 45CSR§10-8, compliance with 4.1.4.c. streamlines the 45CSR10 Monitoring Plan under 45CSR§10-8.2.c. for Boiler No. 6. To account for these changes, a note has been added to Section II of the monitoring plan in Appendix A.

R14-0027D Revisions for the Boilers

Refer to Title V permit conditions 4.1.1. through 4.1.4., 4.2.3., 4.4.1., 4.4.2., and 4.4.9., for the applicable limitations and monitoring requirements of this rule that have been incorporated via permit R14-0027D for the boilers.

Molten Salt Furnace & Chlorine Recovery Boiler

There are two natural gas-fired process heaters that are also subject to 45CSR10. One unit is the Molten Salt Furnace (Em. Unit ID: R900), and the other is a Chlorine Recovery Boiler (Em. Unit ID: R881) utilized in the Sulfur Chloride section of the Chlorine Department. Both of the units combust only natural gas. R900 is rated at 15 MMBtu/hr design heat input. R881 is rated at 1.25 MMBtu/hr design heat input. Since the heat input of R881 is less than 10 MMBtu/hr it is not subject to section 3 and sections 6 through 8 of this rule in accordance with 45CSR§10-10.1. The facility is located in Marshall County; therefore, the Priority Classification is I per Table 45-10A at the end of the rule. R900 is a Type 'b' source as defined in 45CSR§10-2.8.b., and is subject to the Priority I Region mass rate limitation in 45CSR§10-3.1.e. Thus, the SO₂ mass rate limit for

R900 is 46.5 lb/hr (11.1.3.). 45CSR§10-10.3. provides an exemption from section 8 (testing, monitoring, recordkeeping, and reporting) for fuel burning units that combust natural gas. Established monitoring and recordkeeping pertaining to combustion of natural gas are sufficient to demonstrate compliance with the emission limitation and qualification for the section 8 exemption. Therefore, R900 is not subject to any MRR requirements in the rule. Refer to current Title V permit conditions 11.1.3.

III. **Permit No. R13-1637A.** No. 6 Boiler is currently covered by permit R13-1637A. The proposed modification application requested to consolidate permit R13-1637A with the revisions permitted in R14-0027D. Therefore, all requirements in the current permit based upon R13-1637A are deleted.

IV. **Permit to Modify, No. R14-0027D.** Based upon the changes in permit R14-0027D, the following revisions are made in the Title V permit conditions:

R14-0027D	Title V	Discussion
4.1.1.	4.1.1.	The requirement is written in the operating permit.
4.1.2.	4.1.2.	The requirement is written in the operating permit.
4.1.3.	4.1.3.	The requirement is written in the operating permit.
4.1.4.	4.1.4.	The requirement is written in the operating permit. 45CSR16 is added to the citations for 4.1.4.b. and f. Requirement 4.1.4.d. is corrected to read Subpart DDDDD (instead of DDDDDD), and 45CSR34 is added to the citation.
4.1.5.	4.1.5.	The requirement is written in the operating permit.
4.1.6.	4.1.6.	The requirement is written in the operating permit. 45CSR34 is added to the citation.
4.1.7.	4.1.7.	The requirement is written in the operating permit. 45CSR34 is added to the Boiler MACT citations.
4.1.8.	4.1.8.	The requirement is written in the operating permit. 45CSR34 is added to the Boiler MACT citation.
4.1.9.	4.1.9.	The requirement is written in the operating permit. 45CSR34 is added to the NESHAPs-MACT citation.
4.1.10.	4.1.10.	The requirement is written in the operating permit. Since the condition applies only to the control equipment in Section 1.0 of R14-0027D, that control equipment is added in parenthesis to the permit condition.
4.2.1.	4.2.3.	The requirement is applicable to Boilers 3, 4, and 5, and is based upon 45CSR10 to monitor SO ₂ using a CEMS. The requirement most resembles that in Title V condition 4.2.3.
4.2.2. and 4.2.2.a. through 4.2.2.e.	4.2.1. 4.2.9.(a), 4.2.10.(a), 4.2.12.(a)	The underlying requirement is based upon 45CSR2 to monitor PM using visible emissions monitoring, and proper operation of fabric filters and ESPs. Requirement 4.2.2.a. is essentially current Title V condition 4.2.1. Therefore, the condition is modified to express the requirements of 4.2.2.a. Requirement 4.2.2.b. is essentially current Title V conditions 4.2.9.(a), 4.2.10.(a), and 4.2.12.(a), for Boilers 5, 4, and 3, respectively. Therefore, requirement 4.2.2.b. is cited with each of these specific conditions in the modified Title V permit.

R14-0027D	Title V	Discussion
	4.2.12.(b)	Requirement 4.2.2.c. is added to current condition 4.2.12.(b). Since the new underlying requirement is more stringent in monitoring frequency than that approved in the CAM Plan, an italicized streamlining note has been added.
	4.2.9.(b), 4.2.10.(b)	Requirement 4.2.2.d. is added to current conditions 4.2.9.(b) and 4.2.10.(b). Since the CAM Plan requirement is more stringent in monitoring frequency than the new underlying requirement, an italicized streamlining note has been added.
	4.2.14.	Requirement 4.2.2.e. pertains to responses to excursions for both the fabric filter and ESP modules. This specific requirement is added to the permit as separate permit condition 4.2.14. The underlying language “item b.” is changed to “conditions 4.2.9.(a), 4.2.10.(a), and 4.2.12.(a)”.
4.2.3.	4.2.15.	The requirement is applicable to Boiler No. 5 after the conversion to natural gas is complete, and is based upon 45CSR40 and 40 C.F.R. Part 75 to monitor NO _x , CO, and diluent gas using a CEMS.
4.2.4.	4.2.16.	The requirement is applicable to Boiler No. 6 after the conversion to natural gas is complete, and is based upon 40 C.F.R. §60.48b to monitor NO _x , CO, and diluent gas using a CEMS. 45CSR16 is added to the citation of authority.
4.3.1.	4.3.4.	The requirement is written in the operating permit with the following corrections: <ul style="list-style-type: none"> The reference to visible emission standards of Condition 4.1.4. is corrected to 4.1.5. since (i) there are no VE standards in 4.1.4.; (ii) 4.1.5. contains the standard for boilers; and (iii) the underlying condition 4.3.1. specifies Method 9 “with respect to the unit being tested.” The last statement regarding the exemption in 45CSR§2A-3.1.b. is corrected to be 45CSR§2A-3.1.a. since (i) 45CSR§2A-3.1.a. applies to natural gas-fired units; and (ii) 45CSR§2A-3.1.b. applies to units with a DHI less than 100 MMBtu/hr.
4.3.2.	4.3.5.	The requirement is written in the operating permit. 45CSR34 is added to the citation of authority.
4.4.1.	3.4.1.	The requirement is already in boilerplate condition 3.4.1. Therefore, the requirement is added to the citation of authority stating the equipment to which this requirement is applicable.
4.4.2.	4.4.7.	The requirement is written in the operating permit. Since this requirement is applicable only to the boilers, language to specify this is added to the permit condition.
4.4.3.	4.4.8.	The requirement is written in the operating permit. Since this requirement is applicable only to the boilers, language to specify this is added to the permit condition.
4.4.4.	4.4.9.	The requirement is written in the operating permit. 45CSR16 is added to the citation of authority.
4.4.5.	4.4.10.	The requirement is written in the operating permit.
4.5.1.	4.5.9.	The requirement is written in the operating permit.

R14-0027D	Title V	Discussion
4.5.2.	4.5.10.	The requirement is written in the operating permit. 45CSR16 is added to the citation of authority.
4.5.3.	4.5.11.	The requirement is written in the operating permit. 45CSR16 is added to the citation of authority.
4.5.4.	4.5.12.	The requirement is written in the operating permit. 45CSR34 is added to the citation of authority.
4.5.5.	4.5.13.	The requirement is written in the operating permit. 45CSR34 is added to the citation of authority.
4.5.6.	4.5.14.	The requirement is written in the operating permit. 45CSR34 is added to the citation of authority.
4.5.7.	4.5.15.	The requirement is written in the operating permit.

Section 1.1. of the operating permit is revised to reflect the changes in the underlying permit. In particular, the design capacity for No. 5 boiler is revised, and a footnote regarding the ESP has been added. Section 1.2. of the operating permit is revised to indicate the current revision of the underlying permit.

- V. **45CSR16 – STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES.** This rule establishes and adopts standards of performance for new stationary sources promulgated by U.S. EPA pursuant to section 111(b) of the federal Clean Air Act, as amended. This rule codifies general procedures and criteria to implement the standards of performance for new stationary sources set forth in 40 C.F.R. Part 60. This rule adopts these federal standards, except as specified in 45CSR§16-4.1. Therefore, this rule is cited with each NSPS requirement within the scope of this significant modification (*i.e.*, Subpart Db).
- VI. **45CSR30 – REQUIREMENTS FOR OPERATING PERMITS.** In his April 10, 2014 letter the Director granted conditional approval for an Extension of Compliance for Boilers No. 3, No. 4, and No. 5 for 40 C.F.R. 63 Subpart DDDDD (Boiler MACT). The terms and conditions in the letter have been incorporated into permit R14-0027D, and are included in this modified operating permit. However, one requirement of the letter not included in R14-0027D is to notify DAQ within seven (7) days when it becomes aware of delays that make it unable to meet the activity dates in the letter which are also in both the underlying permit and this modified operating permit. This particular reporting requirement has been written in the modified Title V permit in keeping with 45CSR§§30-3.3.a. and 5.1., and utilizing the authority of 45CSR§30-5.1.d. Refer to permit condition 4.5.18.
- VII. **45CSR34 – EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS.** This rule establishes and adopts a program of national emission standards for hazardous air pollutants and other regulatory requirements promulgated by the United States Environmental Protection Agency pursuant to 40 CFR Parts 61, 63 and section 112 of the federal Clean Air Act, as amended. This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a), or one or more of the substances listed as hazardous air pollutants in section 112(b) of the CAA. This rule adopts these federal standards, except as specified in 45CSR§34-4.1. Therefore, this rule is cited with each MACT requirement within the scope of this significant modification (*i.e.*, Subpart DDDDD).

- VIII. **45CSR40 – CONTROL OF OZONE SEASON NITROGEN OXIDES EMISSIONS.** Only Boiler No. 5 is subject to this rule. This proposed change in operation does not affect or change this unit's applicability status with these rules. However, the proposed modification will change the way this emission unit demonstrates compliance with the emission standards from this rule. Under CAIR, Eagle Natrium will still be required to obtain allowances to cover NO_x emissions from No. 5 Boiler that were emitted during the Ozone Season. Refer to condition 4.2.3. and 4.5.1. of R14-0027D, which are modified Title V conditions 4.2.15. and 4.5.9., respectively.
- IX. **40 C.F.R. 60 Subpart Db – STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS.** According to §60.40b(a), the affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

Due to their heat input rate, this proposal has the potential to make Boiler Nos. 5 and 6 affected sources under Subpart Db of the New Source Performance Standard as a reconstructed source or modification in 40 C.F.R. §60.14(a), which states "... operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act...". The pollutants that this subpart set a standard for are PM, SO₂, and NO_x.

No. 5 Boiler

This boiler was constructed in 1966. Because Eagle Natrium is attempting to re-gain lost steam generating capacity due to the installation of low-NO_x burners, the source had to make a demonstration to prove the project does not constitute "reconstruction" as defined under Part 60. Under 40 C.F.R. §60.15(d), reconstruction is triggered if the "fixed capital cost" of a project exceeds 50 percent that would be required to construct a comparable new emission unit. For this particular project, Eagle Natrium estimated the fixed capital cost with the conversion of No. 5 Boiler is projected to be 7.9 million dollars and the cost of a replacement unit for No. 5 Boiler to be 37 million dollars. Thus, the cost of the conversion project for No. 5 Boiler is approximately 21% of a replacement unit and does not meet the Part 60 definition of reconstruction. Therefore, the unit is not reconstructed after June 19, 1984, and hence **No. 5 Boiler will not be an affected source under NSPS Subpart Db** for this permitting action.

No. 6 Boiler

The maximum design heat input of No. 6 Boiler will be 182 MMBtu/hr, which exceeds the subpart's applicability threshold of 100 MMBtu/hr. No. 6 Boiler was constructed after the June 19, 1984 applicability date of this subpart. Permit R13-1637 established a less than 10% capacity factor limit for the unit to be fired on natural gas, which excluded the unit from the NO_x emission limitation of §60.44b(b) according to §60.44b(e). This limit was retained in Permit R13-1637A in Condition 4.1.3. The proposed modification requests the capacity of No. 6 Boiler to use 100% natural gas; therefore, **the NO_x limit of §60.44b becomes applicable to No. 6 Boiler upon re-start from the conversion.**

Only the NO_x emission standard is applicable to affected natural gas burning units under Subpart Db. Boiler No. 6 has a heat release rate of 89,435 Btu/hr-ft³. The heat release rate is a function of the furnace volume and design heat input rate. Subpart Db classifies Boiler No. 6 as a "high heat release rate" unit. Hence, according to 40 C.F.R. §60.44b(a), **No. 6 Boiler will be subject to the NO_x limit of 0.20 lb per MMBtu.** Eagle Natrium predicts the NO_x rate with the low NO_x burners and fuel gas recirculation to be 0.04 lb per MMBtu from Boiler #6. Under the subpart, Eagle Natrium will be required to use continuous emission monitors to demonstrate compliance with the limit on a 30 day rolling average.

Applicable Subpart Db Requirements

The following table describes the applicable Subpart Db requirements and discusses how they are incorporated into the modified operating permit.

Section	R14-0027D	Title V	Discussion
§60.44b(a), (h), and (i)	4.1.4.b.	4.1.4.b.	This requirement in 4.1.4.b. limits NO _x to 0.04 lb/MMBtu, which is more stringent than the Subpart Db limit of 0.20 lb/MMBtu. Therefore, a streamlining note has been added to Title V condition 4.1.4.b. §§60.44b(h) and (i) specify that SSM is included in the 30-day rolling average basis for demonstrating compliance with the NO _x limit.
§60.44b(e)	4.1.4.f.	4.1.4.f.	This requirement specifies the natural gas BTU content and limits the hourly and annual natural gas fuel consumption of Boiler No. 6. The underlying requirement cites §60.44(e) as authority. But Subpart D does not apply; thus, this is likely a typographical error and is corrected to read as “§60.44b(e)”.
§60.46b(c)	None	4.2.16.	<p>Among the options mentioned in §60.46b(c), only the requirements of §60.46b(e) are applicable. Since this requirement is closely related to the requirements of §60.48(b) it is included with the same condition.</p> <p>§60.46b(e) states the facility “...shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_x under §60.48(b).” This does not mean that a separate stack test, independent of the NO_x CEMS must be performed in order to demonstrate compliance with the limit under §60.44b or to verify accuracy of or otherwise test the CEMS itself. This requirement means to utilize the CEMS to test for the NO_x emissions. This interpretation is substantiated by the following facts:</p> <ol style="list-style-type: none"> 1. §60.46b(e) clearly states the affected source “shall conduct the performance test ... using the continuous system for monitoring NO_x.” 2. §60.46b(e)(1) states “The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.” This implies that the NO_x CEMS was used to measure and obtain the data for the test.
§§60.48b(b) through (f)	4.2.4.	4.2.16.	This requirement sets forth the applicable Subpart Db NO _x monitoring in §§60.48b(b) through (f), which was incorporated into the underlying permit condition.
§§60.49b(d) and (r)	4.4.4.	4.4.9.	This requirement sets forth the applicable Subpart Db NO _x recordkeeping in §§60.49b(d)(1) and (r)(1), which was incorporated into the

Section	R14-0027D	Title V	Discussion
			underlying permit condition. After comparing the second paragraph of the underlying permit condition to the language in §§60.49b(d)(1) and (2), it was determined that the citation should be corrected from §60.49b(d)(2) to read as §60.49b(d)(1).
§60.49b(h)	4.5.3.	4.5.11.	This requirement sets forth the applicable Subpart Db NO _x reporting in §60.49b(h).

Finally, the permit shield 3.7.2.h. regarding 40 C.F.R. 60 Subpart Db is modified to reflect the details in the preceding discussion. Note, there, that Boilers No. 3 and No. 4 are not subject to this subpart due to their construction dates.

X. **40 C.F.R. 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines.** Applicable Subpart ZZZZ requirements are included in current permit section 13. The compliance date has passed and the regulation has been modified since the requirements were included in the permit; therefore, the following changes have been made:

- a. The compliance date for RICE subject to 40 C.F.R. 63 Subpart ZZZZ is May 3, 2013, as specified in current condition 13.1.1. When the renewal permit was issued, the compliance date was in the future. Consequently, each of the requirements in Section 13.0 of the renewal permit contained a note specifying that the condition was subject to the compliance date. Since the compliance date is now passed, these notes are no longer necessary and are therefore deleted in this permitting action.
- b. Condition 13.1.6. – In two occurrences the language “2 days” is changed to “2 business days”.
- c. Condition 13.1.7. – The entire condition is revised to reflect the applicable requirements.
- d. Condition 13.4.2. – The last statement is added to reflect the applicable requirements.

XI. **40 C.F.R. 63 Subpart DDDDD – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MAJOR SOURCES: INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS.** This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards. The permittee is subject to this subpart since it owns or operates an industrial boiler as defined in §63.7575 that is located at, or is part of, a major source of HAP. This project will reduce HAP emissions from the facility, but it will remain a major source of HAPs. According to technical correspondence¹, the facility potential emissions of HCl will be 10-tpy after the conversion project is complete and No.3 and No. 4 boilers are permanently shut down. Thus, the Boilers 5 and 6 are affected sources under the major source Boiler MACT Subpart DDDDD of Part 63. While Boilers No. 3 and 4 are subject to this subpart, they will be permanently shut down as part of this project to avoid PSD applicability. Therefore, these boilers are not assigned Subpart DDDDD requirements in the modified permit but are permitted to operate as currently configured under the granted compliance extension that was incorporated into underlying permit R14-0027D (*cf.* Title V permit condition 4.1.9.).

¹ E-mail dated 8/12/2014 from Erika Baldauff, Sr. Environmental Engineer, Axiall Corporation.

Compliance Approach

Natural gas is classified under this subpart as a “gas 1” fuel. However, hydrogen gas is not specifically specified in this subpart. However, Eagle Natrium will make the case that the hydrogen gas produced at the facility and consumed by No. 6 Boiler meets the definition of “other gas one fuels”, which is a gas with a mercury concentration of less than 40 micrograms per cubic meter of gas (40 C.F.R. §63.7575). Units consuming a fuel classified under “gas 1” or “other gas 1 fuel” are only subject to the work practices requirements of this subpart, which are periodic tune-ups for each unit and a one-time energy assessment of the facility.

Both of these boilers currently operate with oxygen trim systems and will be equipped with oxygen trim after the conversion. Thus, required subsequent tune-ups for these units will have to be conducted once every five years.

The hydrogen fuel for No. 6 Boiler is supplied from the chlorine circuits at the facility. There are three chlorine circuits, including Circuits 6, 7 and 8. The hydrogen gas generated from Circuits 6 and 8 does not exceed the mercury limit as defined in the subpart. Conversely, the hydrogen from Circuit 7 will have the potential to exceed the mercury threshold as defined. The hydrogen from Circuit 7 will be combined with hydrogen from the other two circuits to meet this threshold level of an “other gas 1 fuel”. Under the Chlor-Alkali MACT (40 C.F.R. 63 Subpart IIII), Eagle Natrium is required to continuously measure the actual mercury concentration in the hydrogen produced from Circuit 7. The Boiler MACT requires sources using “other gas 1 fuel” to prepare and submit a site specific fuel analysis plan for approval to determine if the gas meets the definition. Once the plan is approved, Eagle Natrium will have to implement it and determine if the hydrogen fuel meets the criteria of an “other gas 1 fuel”.

Under Part 63, the definition of reconstruction is the same as under Part 60. Thus, this modification for No. 5 Boiler does not meet this definition. The cost of modification for No.6 Boiler was estimated at 1.3 million dollars. To completely replace it with a new unit was estimated at 4.2 million dollars. The projected cost of the project for No. 6 Boiler is less than 29% of a new boiler. Therefore, this project does not trigger reconstruction for either boiler under Part 63. Therefore, both units are treated as existing units under the Boiler MACT.

The compliance date for the Boiler MACT is January 31, 2016, for existing sources. On March 19, 2014, the applicant filed a compliance date extension request. Eagle Natrium requested an extension to cover Nos. 3, 4, and 5 Boilers to the completion of the conversion project or until December 2016, whichever is sooner. The modification for No. 6 Boiler is projected to be complete by November 2015. Thus, under the present plan, No. 6 Boiler is expected to be operating in compliance with the MACT standard prior to the compliance date of January 31, 2016. Nevertheless, it has been noted by the permittee to this writer that Boiler No. 6 could comply with the Boiler MACT had it not undergone a modification to expand its operational flexibility to combust natural gas in addition to hydrogen gas.

No. 5 Boiler is scheduled to be taken down at the end of February 2016, after the compliance date, to be converted for natural gas firing. It has been estimated the conversion project will take about three months to complete for No. 5 Boiler. For Eagle Natrium to continue operating the Natrium Plant, the applicant may have to purchase electricity externally.

Usually, extensions under Part 63 can be up to a full year for existing sources (four year compliance schedules). Because Eagle Natrium’s proposed plan for this conversion project required Nos. 3 and 4 Boilers to be permanently shutdown to avoid PSD, the driver for the length of the extension is the outcome of the netting analysis under Rule 14. Thus, the extension has to become part of the permitting process.

The extension request was approved on April 10, 2014 and was incorporated into permit R14-0027D, condition 4.1.9., which includes the efforts the applicant will implement to minimize HAP emissions during the extension period. After the conversion is complete, Nos. 5 and 6 Boilers will be capable of meeting the requirements of the MACT Standard without the use of any add on control device(s). It should be noted that this extension does not pertain to the Molten Salt Furnace (Em. Unit ID: R900) and the Chlorine Recovery Boiler (Em. Unit ID: R881). These affected sources are required to be in compliance with this subpart by their applicable compliance date.

Table DDDDD-1 below lists the sections of this subpart and discusses the applicability and non-applicability of the sections to Boilers No. 5 and No. 6, and how the requirements are incorporated into the revised operating permit.

Table DDDDD-1: Boilers No. 5 and No. 6

Subpart DDDDD Section	Title V *	Discussion
§63.7495(b)	4.1.7.	The applicable compliance date requirement for existing sources is included in the renewal permit, which is January 31, 2016. The substantive requirements for the auxiliary boilers are the annual tune-up and one-time energy assessment (cf. discussion below of §63.7500(a)), which must be complete no later than this date in accordance with §63.7510(e) (also discussed below). This requirement is embodied in permit R14-0027D, condition 4.1.7.a., for both boilers No. 5 and No. 6.
§63.7495(d)	None	This section references the notification requirements in §63.7545. In particular, the requirements of §63.7545(b) are applicable, and the permittee has submitted the initial notification accordingly. Since at the time of this significant modification the 120-day period after January 31, 2013 has passed, and there are no on-going requirements in this section, no permit condition is required.
§§63.7500(a)(1) and (2)	4.1.7. 4.1.8.	<u>Work Practice Standards:</u> §63.7500(a)(1) requires the permittee to meet each limit and standard in Tables 1 through 3, and 11 through 13 of Subpart DDDDD. However, while burning gas 1, the units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or the operating limits in Table 4 in accordance with the last sentence in §63.7500(e) (discussed below). Therefore, only Table 3 work practice standards must be examined for burning gas 1. Item #1 of Table 3 is applicable to the units, which requires a tune-up every 5 years (condition 4.1.7.). Additionally, the one-time energy assessment prescribed in item #4 of Table 3 is applicable since the units are existing; are located at a major source of HAP; and are not limited use units (condition 4.1.8.). These requirements are embodied in permit R14-0027D, conditions 4.1.7. and 4.1.8., for both boilers No. 5 and No. 6.
§63.7500(a)(3)	4.1.11.	<u>General Duty Requirement</u> The requirement in §63.7500(a)(3) is applicable and is therefore included in the permit as condition 4.1.11. Since the permittee does not have to comply with this requirement until the compliance date, a note to this effect has been added after the citation of authority.
§63.7500(b)	None	The application does not mention any request (or intent to request) alternative work practice standards; therefore, this requirement is not applicable.

Subpart DDDDD Section	Title V *	Discussion
§63.7500(c)	None	This requirement is not applicable to the units since they are not limited use boilers.
§63.7500(d)	None	This requirement is not applicable to the units since they have a design heat input (DHI) greater than 5 MMBtu/hr and are not in either the Gas 2 or light liquid fuel subcategories.
§63.7500(e)	None	The units do not qualify for the ranges of design heat input (DHI) in this requirement. However, this requirement does provide that while burning gas 1, the units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or the operating limits in Table 4, which has already been considered in the discussion of §63.7500(a).
§63.7500(f)	None	This section requires compliance with the standards at all times the affected unit is operating, except during periods of startup and shutdown during which time the permittee must comply only with Table 3 to Subpart DDDDD. However, the startup and shutdown requirements of Table 3 (items #5 and #6) are not applicable since they pertain to standards in Tables 1 or 2 or 11 through 13 of Subpart DDDDD. Moreover, the requirements to conduct a tune-up and energy assessment are not affected by whether the units are normally operating, or are in startup or shutdown. Thus, this section of the regulation does not apply.
§63.7505(a)	4.1.7. 4.1.8.	This section requires compliance with the emission limits, work practice standards, and operating limits in Subpart DDDDD. The section is cited with the conditions for work practice standards. These requirements are embodied in permit R14-0027D, conditions 4.1.7. and 4.1.8., for both boilers No. 5 and No.6.
§63.7510(e)	4.1.7.a. 4.1.8. 4.3.5.	This section states that the initial tune-up and one-time energy assessment must be complete before the compliance date. This requirement is embodied in permit R14-0027D, condition 4.1.7.a. for both boilers No. 5 and No.6. The energy assessment requirement is also in permit condition 4.1.8.; therefore, this section is cited for that condition as well. The underlying PSD permit condition 4.3.2. also applies this requirement to completing the fuel analysis of the hydrogen gas to be combusted in No. 6 Boiler no later than 180 days after the compliance date. Refer to Title V permit condition 4.3.5. In other words, the Subpart DDDDD section is cited for compliance date only – not to specify that the sources are subject to fuel testing requirements in §63.7510(e).
§63.7510(j)	4.1.7.b.	This requirement is embodied in permit R14-0027D, condition 4.1.7.b. for both boilers No. 5 and No.6.
§63.7515(d)	4.1.7.c., 4.1.7.d.	This requirement is embodied in permit R14-0027D, conditions 4.1.7.c. and 4.1.7.d. for both boilers No. 5 and No.6.
§63.7521(b)	None	The requirements of this particular section are not applicable since the affected sources are not subject to fuel testing requirements in §63.7510(a).
§63.7521(f)	4.3.6.	The requirement to demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in §63.7575, the fuel specification analyses for mercury are applicable. Therefore, the requirement is included in the modified title V permit.

Subpart DDDDD Section	Title V *	Discussion
§63.7521(g)	4.5.12.	This requirement is embodied in permit R14-0027D, condition 4.5.4. for boiler No.6.
§63.7521(h)	4.3.6.	This requirement applies to both natural gas (both boilers) and hydrogen gas (Boiler No. 6); therefore, it is included in the modified permit.
§63.7521(i)	4.3.6.	Item #3 in Table 6 is for the mercury fuel specification for other gas 1 fuels, and is applicable to the hydrogen gas combusted in No. 6 boiler.
§63.7530(a)	None	This section regarding initial performance tests and fuel analyses is not applicable since the boilers are not subject to Subpart DDDDD emission limits.
§63.7530(b)	None	This section regarding performance testing and fuel analyses is not applicable since the boilers are not subject to emission limits, and thereby are not subject to Subpart DDDDD testing and fuel analyses used to demonstrate compliance with emission limits.
§63.7530(c)	None	This section regarding fuel analyses is not applicable since the boilers are not subject to Subpart DDDDD emission limits.
§63.7530(d)	4.5.16.	This section is applicable since the units are in the <i>Unit designed to burn gas 1 subcategory</i> . A parenthetical reference to the permit condition for the tune-up is included.
§63.7530(e)	4.5.13.	This applicable requirement is embodied in permit R14-0027D, condition 4.5.5. for both boilers No. 5 and No.6.
§63.7530(f)	4.5.13.	This applicable requirement to submit a NOCS is embodied in permit R14-0027D, condition 4.5.5. for both boilers No. 5 and No.6. However, since the underlying permit did not cite §63.7530(f), it will be added to the citation of authority.
§63.7530(g)	4.5.13.	This applicable requirement is embodied in permit R14-0027D, condition 4.5.5. for both boilers No. 5 and No.6.
§63.7530(h)	None	The units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or associated requirements in item 5 of Table 3 to Subpart DDDDD.
§63.7533	None	The boilers are not complying using the alternative equivalent output-based emission limits.
§63.7535	None	The boilers are not subject to a Subpart DDDDD requirement to monitor and collect data pursuant to this section.
§63.7540(a)(10)	4.1.7. 4.1.7.d.vi.	The annual frequency for tune-ups in this section does not apply since the boilers are equipped with a continuous oxygen trim system that maintains an optimum air to fuel ratio. However, applicable requirements of §63.7540(a)(12) incorporates by reference requirements specified in §63.7540(a)(10). Therefore, this section is cited in the permit condition that is already embodied in permit R14-0027D, condition 4.1.7. It was noted that §63.7540(a)(10)(vi) was not included in the PSD permit condition. This particular requirement is applicable since applicable requirement §63.7540(a)(12) specifies the applicability of §§63.7540(a)(10)(i) through (vi).
§63.7540(a)(11)	None	This section does not apply since the boilers are greater than 10 MMBtu/hr heat input.

Subpart DDDDD Section	Title V *	Discussion
§63.7540(a)(12)	4.1.7.c.	This section specifying the 5-year tune-up frequency is applicable since the boilers are equipped with a continuous oxygen trim system that maintains an optimum air to fuel ratio. This applicable requirement is embodied in permit R14-0027D, condition 4.1.7.c. for both boilers No. 5 and No.6.
§63.7540(a)(13)	4.1.7.c.	This requirement allows a 30-day delay for the tune-up if the unit is not operating the day the tune-up is scheduled. Since this pertains to the tune-up it is written with condition 4.1.7.c.
§63.7540(b)	4.5.17.	The purpose of this requirement is to report deviations from applicable requirements. While the requirement reads that it pertains to emission limits and operating limits (to which the units are not subject), it also pertains to those requirements in Tables 1 through 4 or 11 through 13. The units are subject to work practice standards in Table 3 (conditions 4.1.7. and 4.1.8.). Therefore, the condition has been written to refer to work practice standards in Table 3.
§63.7540(c)	4.3.7.	This section is applicable since the boilers are complying as “Unit designed to burn gas 1” subcategory, which includes other gas 1 fuels that must meet the mercury concentration limitation of 40 µg/m ³ specified in the definition of “ <i>Other gas 1 fuel</i> ” in §63.7575.
§63.7540(d)	None	This section is not applicable since item #5 in Table 3 applies to units subject to emission limits in Table 1 or 2 or 11 through 13 to Subpart DDDDD, to which the boilers are not subject.
§63.7545(a)	4.5.13.	§§63.7(b) and (c) are not applicable since the boilers are not subject to Subpart DDDDD performance testing. §63.8(e) is not applicable since no CMS is utilized. §§63.8(f)(4) and (6) are not applicable since neither an alternative monitoring method, nor an alternative to the relative accuracy test is utilized. Among §§63.9(b) through (h), only the NOCS requirement of §63.9(h) is applicable. Therefore, this section is cited in condition 4.5.13., which is from the underlying permit R14-0027D, condition 4.5.5.
§63.7545(b)	None	This operating permit renewal is past the 120-day period after January 31, 2013; therefore, no permit condition is required.
§63.7545(c)	None	This section is not applicable since the boilers were constructed prior to January 31, 2013.
§63.7545(d)	None	This section is not applicable since the boilers are not subject to a Subpart DDDDD performance testing requirement.
§63.7545(e)	4.5.13.	This requirement has been discussed under §63.7530(f).
§63.7545(f)	None	This requirement is not applicable since the permittee does not intend to use an alternative fuel other than natural gas (both units) and hydrogen gas (Boiler No. 6 only).
§63.7545(g)	None	This section is not applicable since the boilers will not combust solid waste.
§63.7545(h)	None	After conversion from coal, Boiler No. 5 will combust only natural gas. After conversion from combusting primarily hydrogen gas, Boiler No. 6 will primarily combust natural gas, but will retain the capability of combusting hydrogen gas, which will meet the mercury concentration limit making it an “Other gas 1 fuel”. Thus, while burning either natural gas, or hydrogen gas, both units will be considered to be in the “Unit designed to burn gas 1” subcategory as this term is

Subpart DDDDD Section	Title V *	Discussion
		defined in §63.7575. Since no other fuels will be combusted, there will be no change in subcategory. Therefore, it is not necessary to include this requirement in the modified permit.
§63.7550(a)	4.5.14.	This section points to Table 9 of Subpart DDDDD, which requires a compliance report. The requirements in Table 9 are based on items that can vary as to applicability. Therefore, the condition is written based on applicable requirements in Table 9. Non-applicable language (e.g., emission limits, operating limits, and CMS-related) is excluded from the condition. Furthermore, since the boilers are subject to the 5-year frequency for tune-ups, the compliance report frequency will be submitted at the same frequency in accordance with this section of the regulation.
§63.7550(b)	4.5.14.	The requirements of this section are referenced by §63.7550(a), Table 9. Since the units are on a 5-year tune-up frequency, the applicable language of §63.7550(b)(1) through (4) are included in condition 4.5.14. The requirements are embodied in permit R14-0027D, condition 4.5.6.
§63.7550(c)	4.5.14.a.	The requirements of this section are referenced by §63.7550(a), Table 9. Only certain sections of the requirements in §63.7550(c)(1) through (5) are applicable. Requirement §63.7550(c)(2) is not applicable since fuel analyses is not utilized. Requirement §63.7550(c)(3) is not applicable since there are no applicable emission limits and performance testing is not utilized. Requirement §63.7550(c)(4) is not applicable since there are no applicable emission limits and a CMS is not utilized. Only §63.7550(c)(1) is applicable, which references §63.7550(c)(5). Several of the requirements are embodied in permit R14-0027D, condition 4.5.6.
§63.7550(d)	None	This section is not applicable since the boilers are not subject to Subpart DDDDD emission limits.
§63.7550(e)	None	This section is not applicable since the boilers are not subject to Subpart DDDDD emission limit, operating limit, or CMS requirement.
§63.7550(f)	None	This section is reserved.
§63.7550(g)	None	This section is reserved.
§63.7550(h)(1)	None	This requirement is not applicable since no Subpart DDDDD performance test is required.
§63.7550(h)(2)	None	This requirement is not applicable since no CEMS is utilized or required by Subpart DDDDD.
§63.7550(h)(3)	4.5.14.	Since this requirement pertains to the report required by Table 9 of Subpart DDDDD, then it is also written with the compliance report condition 4.5.14.
§63.7555(a)	4.4.11.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7555(b)	None	This section is not applicable since CEMS, COMS, and CMS are not utilized.
§63.7555(c)	None	None of the requirements in this section, or Table 8 that it references, are applicable since the boilers are not subject to emission limitations and are not equipped with air pollution control devices.

Subpart DDDDD Section	Title V *	Discussion
§63.7555(d)	None	This section is not applicable since the boilers are not subject to emission limitations and operating limitations in Tables 1, 2, or 11 through 13 of Subpart DDDDD.
§63.7555(e)	None	This section is not applicable since the boilers are not subject to emission limitations, and thus emissions averaging is not applicable.
§63.7555(f)	None	This section is not applicable since efficiency credits are not being utilized.
§63.7555(g)	4.4.12.	This section is applicable since the hydrogen gas fuel for Boiler No. 6 will meet the specification for mercury.
§63.7555(h)	None	This section is not applicable since the units will not use an alternative fuel other than natural gas or “Other gas 1 fuel”.
§63.7555(i)	4.4.13.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7555(j)	4.4.14.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7560	4.4.15.	These applicable recordkeeping requirements are set forth as a permit condition.
§63.7575	4.1.4.d.	The definition of “other gas 1 fuel” is utilized as a mercury content limitation for the hydrogen gas combusted in Boiler No. 6 and is specified in R14-0027D, condition 4.1.4.d. (Title V cond. 4.1.4.d.). This section is also cited for R14-0027D, Condition 4.1.6. (Title V cond. 4.1.6.) to define an oxygen trim system.

* Bold font Title V condition numbers indicate that the underlying PSD permit revision R14-0027D did not include the applicable Subpart DDDDD requirement, but it is being included in this significant modification of the Title V permit in accordance with 45CSR§30-3.3.a.

Other requirements in Subpart DDDDD not addressed in the table above are not applicable to Boilers No. 5 and No. 6 for one or more of the following reasons:

- The units are not new or reconstructed, as these terms are specified in §§63.7490(b) and (c).
- The units are not subject to pollutant emission limits pursuant to 40 C.F.R. 63 Subpart DDDDD.
- The units are not EGUs.
- The units are not equipped with an add-on air pollution control device.
- The fuel subcategory for the requirement does not apply to the units.
- The heat input range for the requirement does not apply to the units.
- The units are not limited-use, as this term is defined in §63.7575.
- The units do not utilize a CEMS or CPMS to comply with any Subpart DDDDD requirement.

Molten Salt Furnace & Chlorine Recovery Boiler

There are also two natural gas-fired process heaters that are subject to Subpart DDDDD. One unit is the Molten Salt Furnace (Em. Unit ID: R900), and the other is a Chlorine Recovery Boiler (Em. Unit ID: R881) utilized in the Sulfur Chloride section of the Chlorine Department. Both of the units combust only natural gas, and the former was constructed in 1975, and the latter in 1957. Neither unit has been reconstructed; therefore, both are existing units under Subpart DDDDD. Boiler R881 is not equipped with an oxygen trim system. According to technical correspondence² the Molten Salt Furnace R900 is currently equipped with oxygen analyzers and the permittee is evaluating a project to upgrade the system to be more robust and reliable utilizing automatic controls. However, the permittee stated in the correspondence that the current configuration does not meet the definition of a continuous “Oxygen trim system” as specified in §63.7575. Therefore,

² E-mail dated 7/31/2014 from Erika Baldauff, Sr. Environmental Engineer, Axiall Corporation.

requirements for R900 will be written in this modification for an existing unit without a continuous oxygen trim system. Nevertheless, in order to provide flexibility, the permittee requested adding or incorporating by reference (IBR) requirements to account for the possible implementation of an oxygen trim system that meets the Subpart DDDDD definition. Therefore, in permit conditions based upon requirements that depend upon the presence or absence of a continuous oxygen trim system a note has been written following the citation of authority to IBR applicable requirements (*i.e.*, 5-year tune-up frequency) for the potential implementation of a continuous oxygen trim system on the Molten Salt Furnace (Em. Unit ID: R900). The affected permit conditions are 11.1.8. and 11.5.3. for the tune-up work practice requirement and corresponding compliance reports, respectively.

Table DDDDD-2 below lists the sections of this subpart and discusses the applicability and non-applicability of the sections to R881 and R900 and how the requirements are incorporated into the revised operating permit. R881 is in permit section 8, and R900 is in permit section 11.

Table DDDDD-2: Molten Salt Furnace & Chlorine Recovery Boiler

Subpart DDDDD Section	Title V	Discussion
§63.7495(b)	8.1.8. 11.1.7.	The applicable compliance date requirement for existing sources is included in the modified permit, which is January 31, 2016. The substantive requirements for the R881 and R900 are the tune-ups and one-time energy assessment (cf. discussion below of §63.7500(a)), which must be complete no later than the compliance date in accordance with §63.7510(e) (also discussed below).
§63.7495(d)	None	This section references the notification requirements in §63.7545. In particular, the requirements of §63.7545(b) are applicable, and the permittee has submitted the initial notification accordingly. Since at the time of this significant modification the 120-day period after January 31, 2013 has passed, and there are no on-going requirements in this section, no permit condition is required.
§§63.7500(a)(1) and (2)	8.1.9. 11.1.8. 8.1.10. 11.1.9.	<p><u>Work Practice Standards:</u></p> <p>§63.7500(a)(1) requires the permittee to meet each limit and standard in Tables 1 through 3, and 11 through 13 of Subpart DDDDD. However, while burning natural gas (<i>i.e.</i>, gas 1), the units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or the operating limits in Table 4 in accordance with the last sentence in §63.7500(e) (discussed below). Therefore, only Table 3 work practice standards must be examined for burning gas 1. Item #3 of Table 3 is applicable to R900 since it is without a continuous oxygen trim system and is greater than 10 MMBtu/hr. Following the citation of authority, permit condition 11.1.8. will IBR item #1 requirements to account for the potential installation of a continuous oxygen trim system.</p> <p>Item #1 applies to R881 since it is less than 5 MMBtu/hr heat input (even though it does not have an oxygen trim system).</p> <p>Additionally, the one-time energy assessment prescribed in item #4 of Table 3 is applicable since the units are existing; are located at a major source of HAP; and are not limited use units.</p> <p>Based upon the definition in §63.7575, the extent of the <i>Energy assessment</i> is based upon the combined heat input capacity of affected boilers and process heaters at the facility.</p>

Subpart DDDDD Section	Title V	Discussion
		<p>In this case, there are four affected facilities: No. 5 Boiler (R072), No. 6 Boiler (R097), Molten Salt Furnace (R900), and the Chlorine Recovery Boiler (R881). The heat inputs for the units are 1,125 MMBtu/hr, 182 MMBtu/hr, 15 MMBtu/hr, and 1.25 MMBtu/hr. This equates to 1,323.25 MMBtu/hr potentially operating at 8,760 hr/yr. This yields an annual combined heat input of 11.6×10^6 MMBtu/yr, or 11.6 trillion Btu (TBtu) per year. As such, section (3) of the definition of <i>Energy assessment</i> in §63.7575 is applicable. In order to specify this applicable definition, and its corresponding substantive requirement, the last sentence of item #4 in Table 3 is revised from:</p> <p>The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in 40 C.F.R. §63.7575:</p> <p>to incorporate the applicable definition and thus reads:</p> <p>The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in applicable section (3) of the definition of <i>Energy assessment</i> in 40 C.F.R. §63.7575: The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.</p> <p>Based on this definition, there are 24 on-site technical labor hours for the first TBtu/yr, which leaves 10 more TBtu/yr at 8 on-site technical labor hours each. This yields a total of $(24) + (10) \times (8) = 104$ on-site technical labor hours, which is distributed over the four Subpart DDDDD affected units listed above as specified in the definition of energy assessment.</p>
§63.7500(a)(3)	8.1.11. 11.1.10.	<p><u>General Duty Requirement</u></p> <p>The requirement in §63.7500(a)(3) is applicable and is therefore included in the permit. Since the permittee does not have to comply with this requirement until the compliance date, a note to this effect has been added after the citation of authority.</p>
§63.7500(b)	None	The application does not mention any request (or intent to request) alternative work practice standards; therefore, this requirement is not applicable.
§63.7500(c)	None	This requirement is not applicable to the units since they are not limited use boilers.

Subpart DDDDD Section	Title V	Discussion
§63.7500(d)	None	This requirement is not applicable to the units since they are not in either the Gas 2 or light liquid fuel subcategories.
§63.7500(e)	8.1.9.	<p>R881 meets the criteria in this section, and is therefore subject to this requirement to conduct tune-ups every 5 years.</p> <p>Since R900 is rated at 15 MMBtu/hr it does not meet any criteria in this section; therefore, it is not cited in condition 11.1.8.</p> <p>However, this requirement does provide that while burning gas 1, the units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or the operating limits in Table 4, which has already been considered in the discussion of §63.7500(a).</p>
§63.7500(f)	None	This section requires compliance with the standards at all times the affected unit is operating, except during periods of startup and shutdown during which time the permittee must comply only with Table 3 to Subpart DDDDD. However, the startup and shutdown requirements of Table 3 (items #5 and #6) are not applicable since they pertain to standards in Tables 1 or 2 or 11 through 13 of Subpart DDDDD. Moreover, the requirements to conduct a tune-up and energy assessment are not affected by whether the units are normally operating, or are in startup or shutdown. Thus, this section of the regulation does not apply.
§63.7505(a)	11.1.8. 11.1.9. 8.1.9. 8.1.10.	This section requires compliance with the emission limits, work practice standards, and operating limits in Subpart DDDDD. The section is cited with the conditions for work practice standards.
§63.7510(e)	11.1.8. 11.1.9. 8.1.9. 8.1.10.	This section states that the initial tune-up and one-time energy assessment must be complete before the compliance date.
§63.7510(j)	None	This section is not applicable since it is not anticipated that the sources will not have operated between the effective date of the regulation and the compliance date.
§63.7515(d)	8.1.9. 11.1.8.	The requirements of this particular section are applicable since R900 is subject to the annual tune-up and R881 is subject to the 5-year tune-up requirement. The requirement is included with the tune-up condition.
§63.7521(b)	None	The requirements of this particular section are not applicable since the affected sources are not subject to fuel testing requirements in §63.7510.
§63.7521(f)	None	The section is not applicable since the units will not use a fuel other than natural gas.
§63.7530(a)	None	This section regarding initial performance tests and fuel analyses is not applicable since the boilers are not subject to Subpart DDDDD emission limits.
§63.7530(b)	None	This section regarding performance testing and fuel analyses is not applicable since the boilers are not subject to emission limits, and thereby are not subject to Subpart DDDDD testing and fuel analyses used to demonstrate compliance with emission limits.
§63.7530(c)	None	This section regarding fuel analyses is not applicable since the boilers are not subject to Subpart DDDDD emission limits.

Subpart DDDDD Section	Title V	Discussion
§63.7530(d)	8.5.6. 11.5.1.	This section is applicable to R881 since it is less than 10 MMBtu/hr and designed to burn gas 1. It also applies to R900 since it is designed to burn gas 1. A parenthetical reference to the permit condition for the tune-up is included.
§63.7530(e)	8.5.6. 11.5.1.	This section is applicable to both units since an energy assessment is required for both units.
§63.7530(f)	8.5.6. 11.5.1.	This applicable requirement to submit a NOCS containing the results of the initial compliance demonstration is applicable to both units.
§63.7530(h)	None	The units are not subject to the emission limits in Tables 1 and 2 or 11 through 13, or associated requirements in item 5 of Table 3 to Subpart DDDDD.
§63.7533	None	The units are not complying using the alternative equivalent output-based emission limits.
§63.7535	None	The units are not subject to a Subpart DDDDD requirement to monitor and collect data pursuant to this section.
§63.7540(a)(10)	8.1.9. 11.1.8.	The annual frequency for tune-ups in this section is applicable to R900 since it is not equipped with a continuous oxygen trim system and is greater than 10 MMBtu/hr. Further, the section does not independently apply to R881 since it is less than 10 MMBtu/hr heat input. However, applicable requirements in §63.7540(a)(12) incorporates by reference requirements specified in §63.7540(a)(10). Therefore, this section is cited in the permit condition 8.1.9. for the 5-year tune-up for R881.
§63.7540(a)(11)	None	This section does not apply to R900 since it is greater than 10 MMBtu/hr heat input. Even though it is less than 10 MMBtu/hr, this section does not apply to R881 since it is subject to the requirements of §63.7540(a)(12) being less than 5 MMBtu/hr.
§63.7540(a)(12)	8.1.9.	This section specifying the 5-year tune-up frequency is not applicable to R900 since it is not equipped with a continuous oxygen trim system. However, it applies to R881 since it is less than 5 MMBtu/hr.
§63.7540(a)(13)	8.1.9. 11.1.8.	This requirement allows a 30-day delay for the tune-up if the unit is not operating the day the tune-up is scheduled. Since this pertains to the tune-up it is written with conditions 8.1.9. and 11.1.8.
§63.7540(b)	8.5.7. 11.5.2.	The purpose of this requirement is to report deviations from applicable requirements. While the requirement reads that it pertains to emission limits and operating limits (to which the units are not subject), it also pertains to those requirements in Tables 1 through 4 or 11 through 13. The units are subject to work practice standards in Table 3. Therefore, the condition has been written to refer to work practice standards in Table 3.
§63.7540(d)	None	This section is not applicable since item #5 in Table 3 applies to units subject to emission limits in Table 1 or 2 or 11 through 13 to Subpart DDDDD, to which the units are not subject.
§63.7545(a)	8.5.6. 11.5.1.	§§63.7(b) and (c) are not applicable since the units are not subject to Subpart DDDDD performance testing. §63.8(e) is not applicable since no CMS is utilized. §§63.8(f)(4) and (6) are not applicable since neither an

Subpart DDDDD Section	Title V	Discussion
		alternative monitoring method, nor an alternative to the relative accuracy test is utilized. Among §§63.9(b) through (h), only the NOCS requirement of §63.9(h) is applicable.
§63.7545(b)	None	This operating permit significant modification is past the 120-day period after January 31, 2013; therefore, no permit condition is required.
§63.7545(c)	None	This section is not applicable since the boilers were constructed prior to January 31, 2013.
§63.7545(d)	None	This section is not applicable since the boilers are not subject to a Subpart DDDDD performance testing requirement.
§63.7545(e)	8.5.6. 11.5.1.	This requirement has been discussed under §63.7530(f).
§63.7550(a)	8.5.8. 11.5.3.	This section points to Table 9 of Subpart DDDDD, which requires a compliance report. The requirements in Table 9 are based on items that can vary as to applicability. Therefore, the condition is written based on applicable requirements in Table 9. Non-applicable language (e.g., emission limits, operating limits, and CMS-related) is excluded from the condition. Furthermore, since R900 is subject to annual tune-ups, and R881 is subject to the 5-year frequency for tune-ups, the compliance report frequency in each condition will be tailored for the respective frequency in accordance with this section of the regulation. Following the citation of authority, permit condition 11.5.3. will IBR 5-year frequency reporting requirements for the potential installation of a continuous oxygen trim system.
§63.7550(b)	8.5.8. 11.5.3.	The requirements of this section are referenced by §63.7550(a), Table 9. Since R900 and R881 are on annual and 5-year tune-up frequencies, respectively, the applicable language of §63.7550(b)(1) through (4) are included in the conditions. Following the citation of authority, permit condition 11.5.3. will IBR 5-year frequency reporting requirements for the potential installation of a continuous oxygen trim system.
§63.7550(c)	8.5.8.a. 11.5.3.a.	The requirements of this section are referenced by §63.7550(a), Table 9. Only certain sections of the requirements in §63.7550(c)(1) through (5) are applicable. Requirement §63.7550(c)(2) is not applicable since fuel analyses are not utilized. Requirement §63.7550(c)(3) is not applicable since there are no applicable emission limits and performance testing is not utilized. Requirement §63.7550(c)(4) is not applicable since there are no applicable emission limits and a CMS is not utilized. Only §63.7550(c)(1) is applicable, which references §63.7550(c)(5).
§63.7550(d)	None	This section is not applicable since the units are not subject to Subpart DDDDD emission limits.
§63.7550(e)	None	This section is not applicable since the units are not subject to Subpart DDDDD emission limit, operating limit, or CMS requirement.
§63.7550(f)	None	This section is reserved.
§63.7550(g)	None	This section is reserved.
§63.7550(h)(1)	None	This requirement is not applicable since no Subpart DDDDD performance test is required.

Subpart DDDDD Section	Title V	Discussion
§63.7550(h)(2)	None	This requirement is not applicable since no CEMS is utilized or required by Subpart DDDDD.
§63.7550(h)(3)	8.5.8. 11.5.3.	Since this requirement pertains to the report required by Table 9 of Subpart DDDDD, then it is also written with the compliance report conditions.
§63.7555(a)	8.4.6. 11.4.3.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7555(b)	None	This section is not applicable since CEMS, COMS, and CMS are not utilized.
§63.7555(c)	None	None of the requirements in this section, or Table 8 that it references, are applicable since the units are not subject to emission limitations and are not equipped with air pollution control devices.
§63.7555(d)	None	This section is not applicable since the units are not subject to emission limitations and operating limitations in Tables 1, 2, or 11 through 13 of Subpart DDDDD.
§63.7555(e)	None	This section is not applicable since the units are not subject to emission limitations, and thus emissions averaging is not applicable.
§63.7555(f)	None	This section is not applicable since efficiency credits are not being utilized.
§63.7555(i)	8.4.7. 11.4.4.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7555(j)	8.4.8. 11.4.5.	This applicable recordkeeping requirement is set forth as a permit condition.
§63.7560	8.4.9. 11.4.6.	These applicable recordkeeping requirements are set forth as a permit condition.

Other requirements in Subpart DDDDD not addressed in the table above are not applicable to the Molten Salt Furnace (R900) and the Chlorine Recovery Boiler (R881) for one or more of the following reasons:

- The units are not new or reconstructed, as these terms are specified in §§63.7490(b) and (c).
- The units are not subject to pollutant emission limits pursuant to 40 C.F.R. 63 Subpart DDDDD.
- The units are not EGUs.
- The units are not equipped with an add-on air pollution control device.
- The fuel subcategory for the requirement does not apply to the units.
- The heat input range for the requirement does not apply to the units.
- The units are not limited-use, as this term is defined in §63.7575.
- The units do not utilize a CEMS or CPMS to comply with any Subpart DDDDD requirement.
- The units do not combust any fuel other than natural gas, and the permittee has no intention of burning another fuel in the units.

XII. **40 C.F.R. Part 64 COMPLIANCE ASSURANCE MONITORING.** Boilers No. 5, No. 4, and No. 3 are subject to this regulation since each unit has the potential to emit pre-control particulate matter in amounts greater than 100 tpy and utilize a control device to meet a PM limitation. However, with the changes proposed in this significant modification, Boiler No. 5 potential PM emissions will decrease substantially to a level below the major source threshold. According to Table #1 of the Engineering Evaluation for R14-0027D, potential PM emissions from No. 5 Boiler will decrease from 79.0 lb/hr (combusting coal) to 0.46 lb/hr (conversion to combusting only natural gas). Therefore, Boiler No. 5 will no longer meet the CAM applicability criterion in §64.2(a)(3) and consequently will not be subject to CAM upon conversion to natural gas fuel. Finally, Boilers No.

4 and No. 3 will be permanently shut down as part of this modification; thus, all CAM requirements pertaining to Boilers No. 4 and No. 3 and their associated control devices will no longer be applicable after their permanent shutdown. To account for these changes, language has been added at the end of affected permit conditions indicating that either the requirement will not apply to the affected control device (primarily section 3 conditions), or the requirement will no longer be in effect after the boiler is converted to natural gas or shutdown (section 4 conditions). Refer to modified permit conditions 3.2.1. through 3.2.5., 3.4.4., 3.4.5., 3.5.10., 4.2.1., 4.2.9. through 4.2.13., 4.3.2., and 4.3.3.

XIII. Miscellaneous Changes.

- a. The permit shields 3.7.2.f. and 3.7.2.g. regarding 40 C.F.R. 60 Subparts D and Da are modified to reflect the changes within the scope of the boiler fuel conversion project permitted under this significant modification (SM02) and permit R14-0027D.
- b. Several permit conditions that are entirely stricken for this modification are revised as “Reserved” in order to maintain current permit condition numbering and thereby limit the amount of clerical revisions due to cross-referencing within the operating permit. Refer to conditions 4.2.5. through 4.2.8., 4.4.5., 4.5.7., and 4.5.8.
- c. Permit condition 5.0.1. is added to note that once the boilers that currently fire coal are either converted to natural gas or permanently shut down the requirements of this section pertaining to the associated coal and ash handling will no longer be in effect. No other sources will be combusting coal and thereby producing ash; therefore, the requirements will no longer be applicable after these changes.
- d. The Fluffing and Glove Box (Em. Unit SL014) is deleted from the Emission Units table in Section 1.1. since according to technical correspondence from the permittee the equipment was removed and asbestos is no longer used in their diaphragms.
- e. In Section 1.1. where it states 8.0 Chlorine Dept. – No. 5 Circuit Diaphragm Cell Renewal, it is more accurate to remove the reference to No. 5 Circuit, because the circuit has been permanently shut down. The vacuum tank is still utilized for depositing Tephram diaphragms for No. 6 Circuit. The two vacuum tanks are now merged into one section and referred to as Diaphragm Cell Renewal.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. **45CSR14 – PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES FOR THE PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY.** The changes at the facility permitted under R14-0027D, and incorporated into the Title V permit as significant permit modification SM02, do not trigger Prevention of Significant Deterioration (PSD) requirements as determined in the Engineering Evaluation for permit R14-0027D. Specifically, there is no significant increase or net increase for a pollutant that exceeds its significance threshold; therefore, this significant modification SM02 is not subject to 45CSR14.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: 10/30/2014
Ending Date: 12/1/2014

Point of Contact

All written comments should be addressed to the following individual and office:

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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable for draft/proposed permits.